

Applic. No. 10/010,247
Response Dated April 11, 2005
Responsive to Final Office Action of January 25, 2005

Remarks:

Reconsideration of the application is requested.

Claims 1 to 40 remain in the application. Claims 1 to 24 and 33 to 40 are subject to examination and claims 25 to 32 have been withdrawn from examination.

In item 1 on pages 2 to 3 of the above-identified Office action, claims 1 to 4, 6 to 11 and 13 to 14 have been rejected as being fully anticipated by U.S. Patent No. 5,707,392 to Kortenbach under 35 U.S.C. § 102.

As will be explained below, it is believed that claims 1 and 10 were patentable over the cited art in their original form and, therefore, these claims have not been amended to overcome the reference.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, a surgical clip applier, including:

at least one of first and second jaws defining a channel extending substantially along the longitudinal extent and

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being shaped to guide a surgical clip, the first and second jaws adapted to slidably apply the surgical clip with the channel;

at least one of the jaws is provided with teeth arranged to puncture and damage tissue adjacent to the surgical clip.

Claim 10 calls for, *inter alia*, a surgical clip applier, including:

a first jaw having a longitudinal extent and a first clip guiding channel disposed substantially along the longitudinal extent and terminating in a first anvil; and

a second jaw having a longitudinal extent and a second clip guiding channel disposed substantially along the longitudinal extent and terminating in a second anvil, the first and second jaws adapted to slidably apply a surgical clip with the first and second clip guiding channels.

In the rejection of claims 1 and 10, the Examiner indicates on page 2 of the Office action that the Kortenbach hermaphroditic stamped forceps jaw "discloses a forceps capable of applying clips."

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Applicants respectfully submit that Kortenbach grasper is in no way able to hold or advance a clip in the disclosed jaws 51, 151. A necessary function of a clip applier is an ability to hold a clip and to advance a clip (the holding being needed while the clip applier is traveling to the implantation site, while the jaws are opening prior to implantation, and while the clip is being implanted; and the advancing of the clip occurring at the implantation site); the Kortenbach device cannot perform any of these functions.

On page 5, the Examiner suggests that each of the Kortenbach jaws has a channel 55, which can be defined as a "trench, furrow, or groove." Further on page 5, the "Examiner can easily imagine a c-shaped resilient clip that could fit within the forceps jaw of Kortenbach's device and be applied (slidably) to tissue." (Italics added by applicants.)

In order to apply a clip as suggested by the Examiner, there has to be a locus of motion that allows the clip to move and be slideably applied. In the Examiner's handwritten addition to FIG. 2 of Kortenbach, there is no space into which the clip can move slideably. Therefore, although the illustration alleges to shows a clip that might be applied to living tissue, it can't be

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slideably applied. In fact, the only slideable motion that can be imagined in such a construction is for the clip to fall slideably out of the jaw.

It is respectfully noted that there is no hollow space in the jaws 51, 151 that is "shaped to **guide** a surgical clip" or a jaw with a "clip **guiding** channel" as set forth in claims 1 and 10 of the instant application. One having ordinary skill in the art knows that a "forceps jaw" is not a surgical clip applier. Merely because the '392 forceps has a shape that the Examiner considers to be a "trench, furrow, or groove" does not mean that such a shape can, in any way, apply a surgical clip as set forth in claim 1 or 10.

It is respectfully noted that there is no suggestion in Kortenbach to apply a surgical clip with the device disclosed therein, let alone a disclosure of a feature that can perform such clip application. One reason for the certainty of this conclusion is that the *imagined* clip shown in the Examiner's handwritten depiction in Attachment A requires material properties unknown to experts (no materials existing can perform the functions supposed by the Examiner). See Declaration of Juergen Kortenbach attached hereto.

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A second reason for the certainty of this conclusion is that there is no known surgical clip that is able to survive the kind of implantation that is being suggested by the Examiner. In order to implant the suggested *imagined* clip (see Attachment A) with the '392 Kortenbach device, the following movement of the jaws **must** occur:

- (1) the jaws must be closed during insertion;
- (2) the jaws must be opened at the implantation site; and
- (3) then, the jaws must be closed again to fasten the hypothetical clip.

There exists no clip and, especially, the Examiner has cited no such clip either in the art or in Kortenbach that can:

- (1) be placed in the jaws;
- (2) be compacted down so that the jaws can close and can travel to the implantation site;
- (3) then be released to spring back open again so that the jaws and clip can travel around tissue to be clipped; and
- (4) then be compacted down again to perform the clipping that the *imaginary* "surgical clip" is supposed to accomplish.

The reason why the clip does not exist is because the compacting down in step 2 would lock the clip closed and would entirely prevent steps 3 and 4 from occurring and prevent the clip from working.

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Simply put, the Kortenbach jaws 51, 151 do not define a channel and cannot apply, guide, fit, or even hold a surgical clip. The Kortenbach device is merely a biopsy forceps jaw and is, in no way, intended to apply a clip, nor can it apply such a clip.

It is noted that applicants are particularly knowledgeable about the ability of the Kortenbach jaw 51, 151 because the first of the named inventors of the instant application is the same Kortenbach that is the sole inventor in U.S. Patent No. 5,707,392 to Kortenbach. In the attached declaration, Mr. Kortenbach acknowledges the above facts and conclusions of the applicants and provides that the clip imagined by the Examiner cannot be applied to living tissue as suggested. Therefore, '392 cannot be said to anticipate the features of claims 1 or 10.

The Examiner also states that each of the Kortenbach jaws 51 "has teeth capable of puncturing tissue, as shown in Figure 7." Applicants respectfully believe that such a conclusion is improper. See also the Kortenbach Declaration. There is no specification, mention, suggestion, or hint whatsoever in Kortenbach that would infer that the "teeth" shown in FIG. 7 can be used to "puncture" tissue. The Kortenbach device is a merely

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a biopsy forceps. Thus, it is used to grasp. If the biopsy forceps punctured tissue as argued by the Examiner, the device would no longer be used by a physician because forceps jaws that puncture tissue does not result in the best biopsy of tissue - instead, a biopsy of crushed tissue results. Finally, from FIG. 7, one having ordinary skill in the art would know that the length, width, and angle of the serrations cannot be used to "puncture" tissue as alleged.

For all of these reasons, Kortenbach does not disclose the features of claims 1 or 10 and respectfully requests that the rejection of these claims be withdrawn.

In item 4 on pages 3 to 4 of the above-identified Office action, claims 39 and 40 have been rejected as being fully anticipated by U.S. Patent No. 5,707,392 to Brinkerhoff et al. (hereinafter "Brinkerhoff") under 35 U.S.C. § 102.

As will be explained below, it is believed that claims 39 and 40 were patentable over the cited art in their original form and, therefore, these claims have not been amended to overcome the cited reference.

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Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 39 calls for, *inter alia*, an endoscopic surgical instrument, including:

an end effector separate from and rotatably coupled to said clevis and adapted to grasp and manipulate tissue;

a linkage having:

a rotating element separate from said end effector,
rotatably coupled to said clevis, and coupled to said
first push/pull wire; and

a means for coupling said rotating element and said
end effector; and

an actuator coupled to said proximal end of said hollow member and said proximal end of said push/pull wire for moving said push/pull wire through said hollow member to cause a rotation of said end effector about said clevis.

Similarly, claim 40 calls for, *inter alia*, an endoscopic surgical instrument similar to claim 39 except the linkage has:

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a couple coupling said rotating element and said end effector.

The Examiner asserts on page 4 of the Office action that the Brinkerhoff "instrument has a linkage (66), which has a rotating element (66) that is rotatably coupled to the clevis (65) and coupled to the push/pull wire (54)" and cites Column 4, lines 18-31 of Brinkerhoff for support. (Underline added by applicants.) The reason why applicants have underlined the phrase above is because Brinkerhoff neither suggests nor discloses this rotating couple feature of claims 39 or 40. It is respectfully submitted that the Examiner has misinterpreted the disclosure of Brinkerhoff.

As set forth in Col. 4, lines 20 to 21, the "jaw members 46, 48 are pivotally attached to the distal end of the clevis member 65." Thus, the jaws 46, 48 pivot with respect to the clevis 65. Further, in lines 24 to 26, Brinkerhoff provides that the proximal portion of each jaw member "is pivotally engaged by the distal end of a corresponding connecting or linkage member 66, 68." Thus, the jaws 46, 48 are respectively pivotally connected to one of the linkages 66 or 68. Finally, Brinkerhoff provides in lines 27 to 29 that the "proximal end of the linkage members

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66, 68 are pivotally connected to a flattened plate-like distal portion 69 of push rod 54." Simply put, the chain of connection between the jaws 46, 48 and the push-rod 54 is "jaw-to-linkage-to-push rod" with the linkage 66, 68 only being connected to the push-rod 54 at the first end and to the jaws 46, 48 at the second end - the linkages are not connected in any way to the clevis member 65.

In contrast, pursuant to claims 39 and 40, the linkage has "a rotating element separate from said end effector, rotatably coupled to said clevis, and coupled to said first push/pull wire." As clearly shown in FIGS. 2, 3, 4, and 5, for example, the linkages 62, 66 are each "rotatably" connected to the clevis 26 by respective axels 70, 72. This claimed feature is not disclosed in Brinkerhoff. Accordingly, Brinkerhoff does not disclose or suggest the linkage having "a rotating element . . . rotatably coupled to said clevis" and claims 39 and 40 are allowable over the cited prior art.

Clearly, Brinkerhoff does not show a surgical clip applier or an endoscopic surgical instrument as recited in claims 39 or 40 of the instant application.

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It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1, 10, 39, or 40. Claims 1, 10, 39, and 40 are, therefore, believed to be patentable over the art. The remaining dependent claims are believed to be patentable as well because they all are ultimately dependent on these independent claims.

Finally, applicants appreciatively acknowledge the Examiner's statement that claims 15 to 24 and 33 to 38 are allowed and that claims 5 and 12 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." In light of the above, applicants respectfully believe that rewriting of claims 5 and 12 is unnecessary at this time.

In view of the foregoing, reconsideration and allowance of claims 1 to 24 and 33 to 40 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested, as it is believed to place the application in better

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condition for appeal, without requiring extension of the field
of search.

If an extension of time for this paper is required, petition for
extension is herewith made.

Please charge any fees that might be due with respect to
Sections 1.16 and 1.17 to the Deposit Account of Feldman Gale,
P.A., No. 502524.

Respectfully submitted,

For Applicants

GLM/TK
April 11, 2005

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